1. Newtonian Mechanics
   1. Kinematics
   2. Newton’s Laws of Motion
      1. Static equilibrium:
         * Begin with discussion of something staying at rest vs. an object in motion. Use example of putting a ball on the table – will it stay there? Why? What would it take to make it move? If you push it, it will move. What is the push? A push is a force (will continue discussion later)
         * Hands on activity: Use cup, penny, and paper to show that if you pull paper quick enough the penny just falls right into the cup. If you pull slowly, the penny stays put. Why? (Penny on finger?)
      2. Dynamics of a single particle:
         * Discuss: We were discussing that a push had to be used to move the ball – what is a push? You change the velocity and that’s acceleration. So the force on a mass is from a change in velocity. Ta-da! ***F = ma***!
         * Demo: Push something (textbook?) from 2 directions and see what way it goes – sum of forces. Assign arbitrary number and solve to begin working problems
         * Assign/work on actual problems (perhaps for HW?)
         * Question/Answer session
      3. Systems of two or more objects:
         * Discuss with examples (ie why don’t I fall through the wall when I lean on it? Why doesn’t it fall on me?)
         * Use ½ class to do a force lab using carts with force detectors (Pasco/Venire if available).